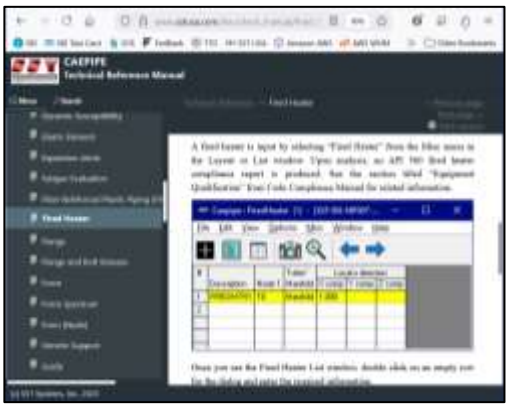
What's new in CAEPIPE 3D+ V14.10?

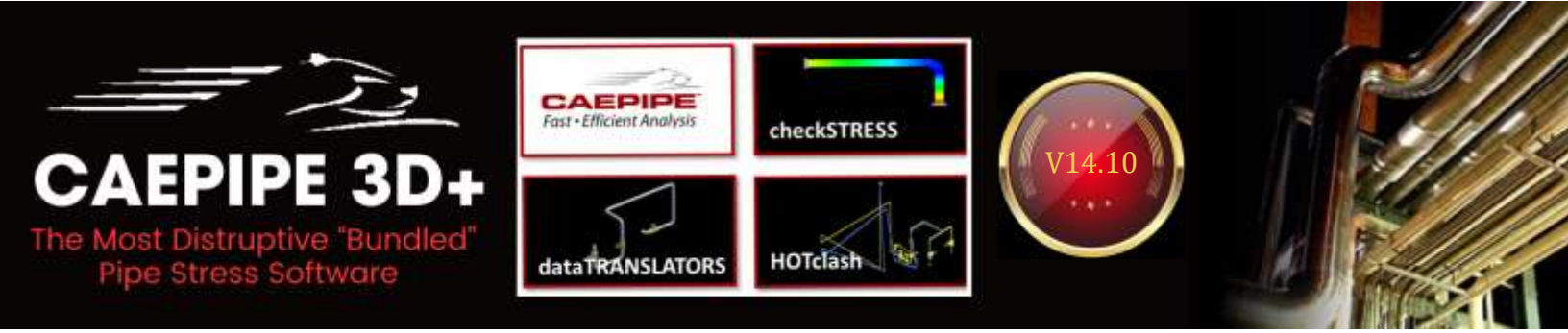
(Release date: September 12, 2025)

This release includes new update related to assessing piping loads applied to nozzles on **Fired Heaters** in accordance with **API 560 (ADDENDUM 2, December 2023).**



Enhancements

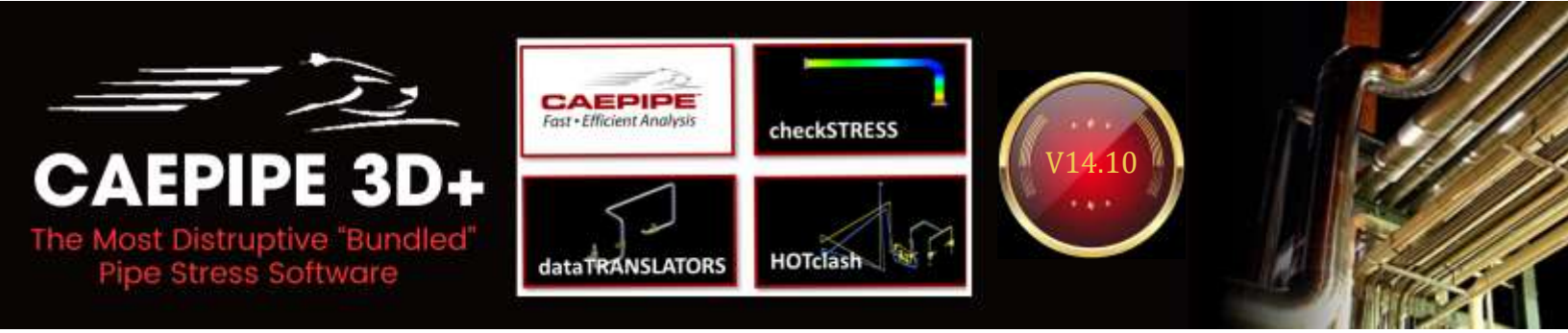
- Assessment of piping loads applied to nozzles on Fired Heaters in accordance with API 560 (4th Edition, 2007) is updated to API 560 (ADDENDUM 2, December 2023). For details, refer to the Section titled "Fired Heaters" in CAEPIPE Technical Reference Manual and CAEPIPE Code Compliance Manual.
- Context sensitive help is now available for nearly all features and commands in CAEPIPE. Context sensitive help can be accessed by pressing the "F1" key from any window or by pressing "F1" key or by clicking the "?" icon in a dialog box.
- A new feature has been added to allow users to map and import the Outer Diameter and Wall Thickness of each component through user-defined attributes, in addition to the default mapping for PCF. For details, refer to the section titled "CAEPIPE 3D+ for PCF" in the CAEPIPE 3D+ User's Manual.
- Selecting the "Automatic" option under the Wave Theory selection in the Wave Load input will now display the Wave Theory chosen by CAEPIPE, based on the wave parameters entered, before closing the Wave Load input dialog.
- CAEPIPE 3D+ for PCF will add a new intermediate node to the pipe element and attach the pipe support at that intermediate node in CAEPIPE 3D+ when the support node data in the PCF file does not match with the start or end node of any piping element.



- When the requirements as per Table 1-1 of ASME B31J (2023) for computation of Flexibility and Stress Intensification Factors are NOT met, CAEPIPE will now issue warning message and continue with the analysis instead of terminating the analysis.
- When the requirements as per Annexure H of EN 13480-3 (2017)/A2:2020 for computation of Stress Intensification Factors are not met, CAEPIPE will now issue warning message and continue with the analysis instead of terminating the analysis.
- CAEPIPE User's Manual, Technical Reference Manual and Code Compliance Manual have been enhanced and updated to be in line with the software version 14.10. These Manuals can be downloaded from the link www.sstusa.com/caepipe-docs.php

Bug Fixes

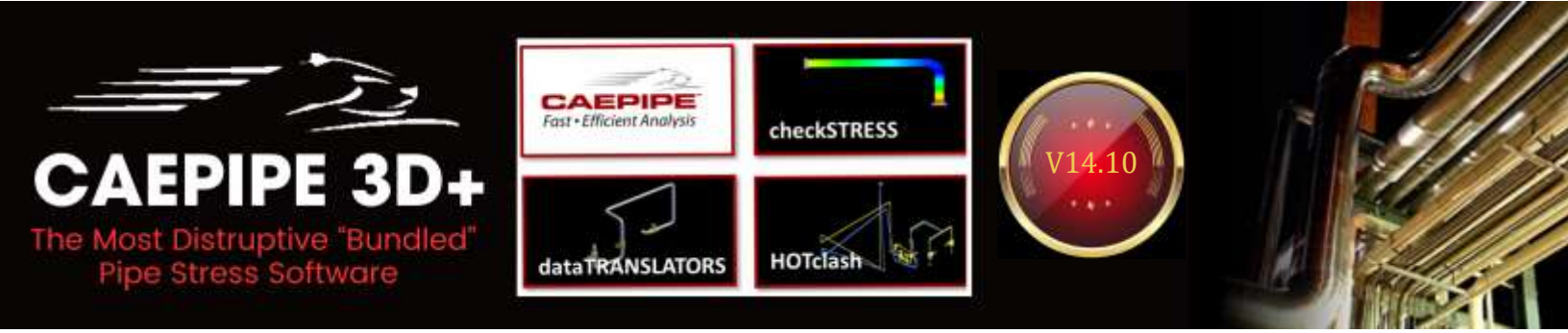
- Allowable Stresses were not shown correctly in Element force results for Expansion load cases. This was only a display issue in the Element forces output which is now corrected. However, the results shown in Sorted stresses and Code compliance results were not affected by this bug.
- "Pressure Correction" option was set to false and grayed out for ASME NM.2.
- Hanger Report was not shown properly when a model contains Response Spectrum load / PSD Response load and Limit Stops.
- Turning ON “Simplified Fatigue Analysis” without turning ON “Detailed Fatigue Analysis” was issuing “Access Violation”.



CAEPIPE Code Compliance Checks

Table given below lists the Piping Codes that are built into CAEPIPE 3D+ Version 14.10 for Code Compliance checks with their piping type and analysis type covered.

Sl. No.	Piping Code and Description	Metallic / Nonmetallic Piping	Above Ground	Buried Piping
1	ASME B31.1 (2024) - Power Piping	Metallic	Yes	---
2	ASME B31.1 (1967) - Power Piping	Metallic	Yes	---
3	ASME B31.1 (1973) - Power Piping	Metallic	Yes	---
4	ASME B31.1 (1977) - Power Piping	Metallic	Yes	---
5	ASME B31.1 (1980) - Power Piping	Metallic	Yes	---
6	ASME B31.3 (2024) - Process Piping	Metallic	Yes	---
7	ASME B31.4 (2022) - Pipeline Transportation Systems for Liquids and Slurries	Metallic	Yes	Yes
8	ASME B31.5 (2022) - Refrigeration Piping and Heat Transfer Components	Metallic	Yes	---
9	ASME B31.8 (2022) - Gas Transmission and Distribution Piping Systems	Metallic	Yes	Yes
10	ASME B31.9 (2020) - Building Services Piping	Metallic	Yes	---
11	ASME B31.12 IP (2023) - Hydrogen Piping	Metallic	Yes	---
12	ASME B31.12 PL (2023) - Hydrogen Pipelines	Metallic	Yes	Yes
13	ASME NM.1 (2022) - Thermoplastic Piping Systems	Nonmetallic	Yes	---
14	ASME NM.2 (2022) - Glass-Fiber-Reinforced Thermosetting-Resin Piping Systems (GRP/FRP)	Nonmetallic	Yes	---
15	ASME Class 2 (1980) - ASME Section III, Subsection NC - Class 2	Metallic	Yes	---
16	ASME Class 2 (1986) - ASME Section III, Subsection NC - Class 2	Metallic	Yes	---
17	ASME Class 2 (1992) - ASME Section III, Subsection NC - Class 2	Metallic	Yes	---
18	ASME Class 2 (2015) - ASME Section III, Subsection NC - Class 2	Metallic	Yes	---
19	ASME Class 2 (2017) ASME Section III, Subsection NC - Class 2	Metallic	Yes	---
20	ASME Class 2 (2021) - ASME Section III, Subsection NC - Class 2	Metallic	Yes	---
21	ASME Class 2 (2023) - ASME Section III, Subsection NC - Class 2	Metallic	Yes	---
22	ASME Class 3 (2017) - ASME Section III, Subsection ND - Class 3	Metallic	Yes	---
23	ASME Class 3 (2021) - ASME Section III, Subsection ND - Class 3	Metallic	Yes	---



Sl. No.	Piping Code and Description	Metallic / Nonmetallic Piping	Above Ground	Buried Piping
24	ASME Class 3 (2023) - ASME Section III, Subsection ND - Class 3	Metallic	Yes	---
25	ISO 14692-3 (2017) - Petroleum and Natural Gas Industries - Glass Reinforced Plastics (GRP/FRP) Piping	Nonmetallic	Yes	Yes
26	EN 13480 (2020) - Metallic industrial piping	Metallic	Yes	Yes
27	EN 13941 (2019) - District heating pipes	Metallic	No	Yes
28	BS 806 (1986) - Construction of Ferrous Piping Installations for and in Connection with Land Boilers (British)	Metallic	Yes	---
29	DNV-ST-F101 – Submarine pipeline systems	Metallic	Yes	---
30	IGEM (2012) - Institution of Gas Engineers and Managers (IGEM) IGE/TD/12 Edition 2 (UK)	Metallic	Yes	---
31	Norwegian (1983) - Process design	Metallic	Yes	---
32	Norwegian (1990) - Process design	Metallic	Yes	---
33	RCC-M (1985) - Design and Construction Rules for Mechanical Components of PWR Nuclear Islands (French)	Metallic	Yes	---
34	RCC-M (2018) - Design and Construction Rules for Mechanical Components of PWR Nuclear Islands (French)	Metallic	Yes	---
35	RCC-M (2020) - Design and Construction Rules for Mechanical Components of PWR Nuclear Islands (French)	Metallic	Yes	---
36	RCC-M (2022) - Design and Construction Rules for Mechanical Components of PWR Nuclear Islands (French)	Metallic	Yes	---
37	CODETI (2013) - CODE DE CONSTRUCTION DES TUYAUTERIES INDUSTRIELLES (French)	Metallic	Yes	---
38	Stoomwezen (1989) - Dutch Power piping code	Metallic	Yes	---
39	Swedish (1978) – Swedish piping code	Metallic	Yes	---
40	Z183 (1990) - Oil Pipeline Systems (Canadian)	Metallic	Yes	---
41	Z184 (1992) - Gas Pipeline Systems (Canadian)	Metallic	Yes	---
42	Z662 (2019) - Oil & Gas Pipeline Systems (Canadian)	Metallic	Yes	Yes
43	NONE (for AWWA M11 applications, and for applications in aircraft, aerospace & defence industries)	Metallic	Yes	Yes

Download an evaluation version of CAEPIPE 3D+ from the link https://www.sstusa.com/caepipe3d-software-download.php.

Earlier versions' Release Notes are available at
http://www.sstusa.com/caepipe-enhancements.php